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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
VO, HAI	

ART UNIT	PAPER NUMBER
1771	9

DATE MAILED: 02/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/974,634	HE ET AL.	
	Examiner	Art Unit	
	Hai Vo	1771	

-- Th MAILING DATE of this communication app ars on the cover sheet with th corr spond nc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 July 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) *9 and 11* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

   I. Claims 1-8 and 10, drawn to a wick material, classified in class 428, subclass 304.4+.

   II. Claims 9 and 11, drawn to a vapor dispensing device, classified in class 239, subclass 44.

   The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the vapor dispensing device does not require the wick material as claimed for patentability (see US 4,286,756). The subcombination has separate utility such as a core material of a capillary loop pump heat pipe.

   Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

3. During a telephone conversation with Damon L. Boyd on 01/13/2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-8

and 10. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9 and 11 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Objections

4. Claims 2-8 and 10 are objected to because of the following informalities: In claim 2, line 2 and claim 3, lines 3 and 7, the term "polythelene" is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 10 recites the limitation "the device of claim 3" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Jones (US 4,286,754). Jones discloses a wick material for use in connection with an air freshener comprising a porous material having a pore size less than 250 microns

and a void volume of 20 to 50% (column 5, lines 20-23, figure 4 and abstract). The transfer rate of a liquid is about 20mg/hr (column 6, line 17). It is the examiner's position that Jones anticipates the claimed subject matter.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Obermayer et al (US 4,356,969). Obermayer teaches a vapor dispenser comprising a cellulosic membrane vapor emitting surface through which the vapor is dispensed from the reservoir to the atmosphere. The membrane has the pore size of less than 250 angstroms preventing the leakage of nonvaporized liquid from the membrane surface (column 6, lines 56-60 and column 10, lines 65-69). The membrane releases the fragrance at a rate of 16.5 mg/hr (example 3). Obermayer fails to teach the void volume of the membrane. Since the pore size and void volume together dictates the controlled rate of release of the vaporized material in the liquid dispenser and the pore size of Obermayer membrane and the controlled rate of release of the vaporized material meets the specific range as set forth in the claim, it is the examiner's position that the void volume of the membrane would be inherently present. Note In re Best 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35

USC 103 in addition to the rejection made under 35 USC 102. Obermayer anticipates or strongly suggests the claimed subject matter.

11. Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Seidenberg (US 4,765,396). Seidenberg teaches a wick for use in a heat pipe comprising an open-cell, ultrahigh molecular weight polyethylene foam that has an average pore size of about 10 to 12 microns and void volume of 40% (abstract and column 5, lines 40, 41, 56-59). Since Seidenberg is using the same porous wick as Applicants and the wick material meets all the requirements of the claim (pore size and void volume), it is the examiner's position that the functional performance of the porous wick would be inherently present (the pore size in combination of the void volume control together play the key role in providing the controlled rate of release of the vaporized material and in allowing the vaporizable material not to leak from the wick material). Note In re Best 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made under 35 USC 102. It seems from the claim, if one meets the structure recited, the properties must be met or Applicant's claim is incomplete (Note discussion found in Ex parte Slob, 157 USPQ 172. Seidenberg anticipates or strongly suggests the claimed subject matter.

12. Claim 1-3 and 10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wirt (US 4,925,327). Wirt teaches a wick for use in a liquid applicator comprising a porous metering of high-density polyethylene that has an average pore size of about 60 to 100 microns and

void volume of 40% to 60% (column 6, lines 20-25). Since Wirt is using the same porous material as Applicants and the porous material meets all the requirements of the claim (pore size and void volume), it is the examiner's position that the functional performance of the porous material would be inherently present (the pore size in combination of the void volume control together play the key role in providing the controlled rate of release of the vaporized material and in allowing the vaporizable material not to leak from the wick material). Note In re Best 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made under 35 USC 102. It seems from the claim, if one meets the structure recited, the properties must be met or Applicant's claim is incomplete (Note discussion found in Ex parte Slob, 157 USPQ 172. Wirt anticipates or strongly suggests the claimed subject matter.

13. Claims 2-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seidenberg (US 4,765,396) in view of Kono et al (US 5,853,633). Seidenberg does not specially disclose the wick material being a high-density polyethylene. Kono teaches the porous ultrahigh molecular weight polyethylene being a high-density polyethylene (column 2, lines 22-26). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a porous, high density polyethylene being a wick material because it is well-know in the art the high-density polyethylene is simply an ultrahigh molecular weight polyethylene.

With regard to claims 4-6 and 8, the pore size and the void volume disclosed by Seidenberg is completely within the ranges set out in the claims (column 5, lines 56-59).

With regard to claim 7, Seidenberg fails to teach the pore size of 30 microns. However, such a variable would have been recognized by one skilled in the art to generate a large capillary pressure. As such, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the porous wick material having the pore size instantly claimed since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. ***In re Aller***, 105 USPQ 233.

With regard to claim 10, since an air freshening device in claims 3 and 10 is not part of the claims and being treated as an intended use limitation. It has been held that a recitation with respect to the manner in which a claimed wick material is intended to be employed does not differentiate the claimed wick material from a prior art wick material satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

14. Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wirt (US 4,925,327). Wirt teaches a wick for use in a liquid applicator comprising a porous metering of high-density polyethylene that has an average pore size of about 60 to 100 microns and void volume of 40% to 60% (column 6, lines 20-25). Such a variable would have been recognized by one skilled in the art as dependent upon

the intended use of the dispensing liquid and to control the rate of delivery of the liquid. As such, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the porous wick material having the pore size instantly claimed since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. ***In re Aller***, 105 USPQ 233.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (703) 605-4426. The examiner can normally be reached on Tue-Fri, 8:30-6:00 and on alternating Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

HV
January 22, 2003

TERREL MORRIS
SUPERVISORY PATENT EXAMINER
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